CME

Alcohol risk assessment and intervention for family physicians

Project of the College of Family Physicians of Canada

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SUMMARY

At-risk and problem drinkers (excluding those with severe dependency) are estimated to be 20% of the Canadian population. With minimal training family physicians can effectively manage patients with alcohol problems. The Alcohol Risk Assessment and Intervention Project of the College of Family Physicians of Canada has developed materials and training for family physicians to use in helping their patients reduce the risks of alcohol-related harm.

RÉSUMÉ

On estime que les buveurs à risque et les surconsommateurs (à l'exclusion des individus souffrant d'une dépendance sévère) représentent 20% de la population canadienne. Avec une formation minimale, les médecins de famille peuvent intervenir efficacement auprès des patients aux prises avec un problème d'alcool. Le projet du Collège des médecins de famille du Canada « Risques associés à la consommation d'alcool : évaluation et intervention » a généré du matériel éducatif destiné aux médecins de famille afin d'aider leurs patients à réduire les risques inhérents à la surconsommation d'alcool.

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ALCOHOL IS THE MOST COMMONLY abused substance in Canada. Approximately eight in every 10 Canadian adults (78%) are current drinkers (any adults who have consumed one or more drinks in the previous year),[1] and an additional 16% of the population are former drinkers.[1]

Problems associated with alcohol are common. Nineteen percent of current drinkers in Canada reported in 1989 that within their lifetime they had driven within an hour of consuming two or more drinks (men 27%, women 9%). Twelve percent of current drinkers recognized that they had experienced alcohol-related physical ailments at some time during their lives. The next most common problem was with social life (11%), followed by problems with negative outlook on life (7%), finances (5%), domestic life (6%), and employment (4%).[1]

The extent of the consequences of alcohol use depends on the individual's pattern of drinking, that is, the quantity, frequency, and context of drinking. The consequences of drinking to intoxication (usually at least five drinks per occasion) are more frequently social or psychological, such as family violence, accidents, or unwanted pregnancy.

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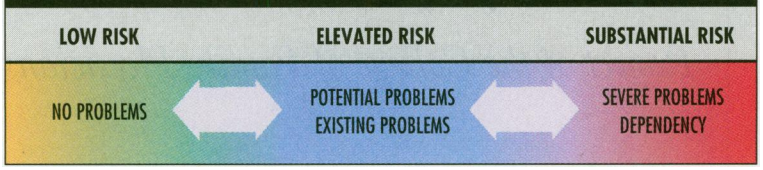
Regular heavy drinking might be associated with social or psychological problems, but physicians are more likely to recognize physical symptoms when patients visit for a different reason.[2]

Figure 1. **Continuum of risk for alcohol problems**



Just as patients can be assessed for risk of a medical condition, such as cardiovascular disease, patients can be assessed for risk of alcohol-related harm based on their consumption of alcohol. Risk, as a result of alcohol consumption, can be conceived of as following a continuum (*Figure 1*).[3]

In Canada, no consensus has been reached about precise guidelines for low-risk consumption. Risk can vary in special populations in Canada, such as among Natives or the elderly. Surprisingly, limits in different countries are comparable. One set of low-risk limits in Canada recommends daily and weekly limits by standard drinks.[4] Low-risk drinkers should have no more than three drinks in a day if they are female, four drinks in a day if they are male, or 12 drinks in total for the entire week. Guidelines also recommend that each week include days when a drinker drinks no alcohol. The definitions of standard drinks by beverage are 45 mL (1½ ounces) of liquor, 150 mL (5 ounces) of wine, 90 mL (3 ounces) of fortified wine or aperitif, or 360 mL (12 ounces) of regular beer.

One can estimate the proportion of the population who currently abstain, are at low risk, are at elevated risk, or have severe problems with dependency by visualizing a pyramid, suggested by Skinner[5] (*Figure 2*). Physicians should be familiar with appropriate interventions at each risk level. Patients most likely to benefit from focused intervention drink more than recommended limits and often have experienced problems related to drinking. Once patients have developed dependency, have lost their jobs, or have lost social supports because of drinking, focused interventions are likely to be less helpful. Drinkers with problems or at risk for problems constitute an estimated 20% of the adult Canadian population; an estimated 5% are severely dependent drinkers. A 1989 survey of Ontario drinkers found that 71.8% were drinking at low-risk levels (<15 drinks/wk), and 23.3% at elevated risk (≥15 and <50 drinks/wk).[6]

A model of primary health care based on the continuum of risk associated with alcohol consumption has been proposed by the Alcohol Risk Assessment and Intervention (ARAI) project (*Table 1*).[3] Most people are at low risk of developing drinking problems because their consumption is low. Nevertheless, people can move from one risk level to another. To maximize the number of people remaining at low risk, physicians can provide primary prevention for non-drinkers and low-risk drinkers. Non-dependent problem drinking is now recognized as highly prevalent and as causing more harm to society than dependent drinking, even though problems of individual non-dependent problem drinkers are generally less frequent or less severe.[7-9] Because successful intervention for problem drinkers can be brief and very low cost, assisting these patients should be a priority for family physicians. Of course, family physicians must also identify and refer patients who are at substantial risk because of their dependence on alcohol.

Family physicians' role

Why should physicians screen and treat problem drinkers? Family physicians are widely accessible: more than 95% of Canadians can identify their family physician and about 70% visit one in any given year. People perceive family physicians to be a credible source of information, and receiving advice on personal drinking from them could carry less stigma than from other providers. Family physicians have some expertise to manage behavioural, psychological, and physical ailments and can provide continuity and coordination of treatment. People with alcohol problems are known to use primary health care services more than the rest of the population.

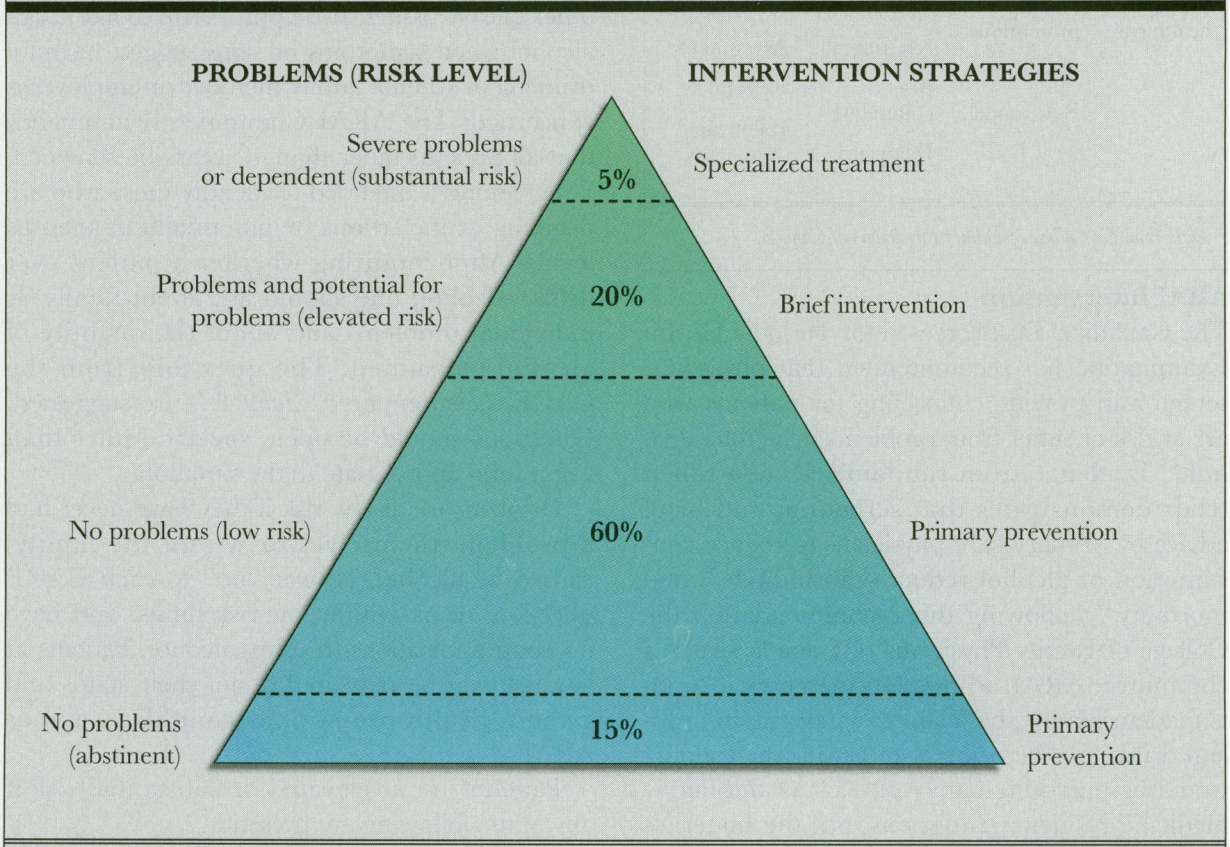
Primary prevention, focused intervention, and referral can be brief and effective. Simply asking about alcohol use changes the behaviour of approximately 5% of at-risk patients.[10]

The Canadian Medical Association provided important support for the ARAI project in their policy summary, "Alcohol and Alcohol-Related Problems" to encourage prevention activities in alcohol-related illness.[11] The following recommendations are included among other statements. Physicians should:

- "recognize the prevalence and severity of alcohol-related problems among their patients,"
- "assess and monitor patients' alcohol use as a preventive strategy and educate patients about the health hazards of alcohol and the concept of low-risk drinking," and
- "engage in the early detection, intervention and care of alcohol-related problems... in their practices."[11]

The policy summary noted that Canadian physicians not only lack sufficient education in providing these services, but that they "share the ambivalence of the general population toward alcohol and alcohol-related problems."[11] Therefore, important barriers prevent physicians from implementing preventive strategies. These barriers have been identified as poor physician preparation for preventive work, lack of confidence in the effectiveness of brief intervention, and insufficient positive reinforcement. As well, inappropriate structures within which to do such work (lack of time, inadequate financial

Figure 2. **Appropriate intervention strategies and proportions of patients at risk for alcohol-related problems:** *Percentages are approximate and can vary greatly in certain regions or among certain populations. Alcohol risk status is not necessarily stable over a person's lifetime.*



Adapted from Skinner.[5]

reimbursement, poorly defined confidentiality guidelines) and lack of appropriate materials are obstacles.

On the other hand, most patients do *not* have these barriers. A survey of patients visiting physicians' offices found that most patients thought inquiry into alcohol consumption was an appropriate physician duty.[12] Therefore, it is important for individuals and groups of physicians to discuss and resolve the ambivalence toward this substantial medical problem and to support innovative education and practice environments for alcohol prevention strategies.

Table 1. **Model of primary health care:** *Intensity of intervention should increase as risk increases.*

PHYSICIANS' ROLES	LOW RISK	ELEVATED RISK	SUBSTANTIAL RISK
Intervention	Primary prevention	Brief intervention	Specialized treatment
Primary health care	Health promotion Advocacy Role model	Identification Assessment Brief counseling Follow up	Identification Assessment Referral Follow up

Data from the College of Family Physicians of Canada.[3]

ARAI intervention

The Canadian Task Force on the Periodic Health Examination has recommended that physicians screen and provide counseling for patients who are at risk or suffer from problems related to alcohol.[13] Evidence from randomized, controlled trials demonstrates that screening and brief advice by primary care physicians to reduce consumption of alcohol reduces morbidity[14-16] and mortality.[17] Following this recommendation the College of Family Physicians of Canada struck a committee (ARAI) to develop materials to train Canadian family physicians to intervene in problem drinking. The primary target for the training would be practising family physicians and family medicine residency programs, but the materials would be suitable for other health care providers. The materials were developed by a national steering committee and were based on the literature and expert advice.[3]

The ARAI process consists of four components: ask, assess, advise, and assist. The process is intended to be general, in that it can be adapted to any type of patient encounter and is flexible. It can be adapted to either a long, comprehensive or a short session. The goals of therapy can be low-risk drinking or abstinence. Goals are more likely to be achieved if they are matched to the *severity* of the problem and if patients are able to *judge* their ability to change.

Ask. Routine screening has several benefits. It allows one to identify problems before they become serious, it educates patients, and it motivates some patients by expressing interest in their drinking. Family practice provides many opportunities in many settings for screening. One can inquire about alcohol during checkups, counseling family planning visits, or when discussing other lifestyle issues. It is appropriate to ask about alcohol when symptoms or signs suggest harmful drinking or when a family member or employer is concerned. The ARAI Committee recommends that all patients older than 12 years be screened.

Screening is intended to identify those who are drinking at hazardous or potentially dangerous levels. After inquiring whether a patient ever drinks alcohol, one should ask about family or individual problems and about the quantity of alcohol consumed. The questions from the CAGE questionnaire[18] (*Table 2*[19]) are suggested. Questions should be open, specific rather than vague, and appropriate to the situation.

Drinkers are at low risk if they have never had a problem (themselves or within the family) caused by alcohol, answer "no" to each CAGE question, drink within low-risk limits, and have no contraindications to using alcohol. Patients at low risk can be reassured about their status and given a health promotion pamphlet, such as ARAI's.[3]

Patients are at elevated or substantial risk if any of the following are present:

- a recent problem related to alcohol, or a past problem and alcohol misuse is maintained,

- a family member who drinks alcohol at hazardous levels,
- a positive response to one or more CAGE questions, or
- drinking exceeds any of the low-risk limits.

Assess. Once patients are identified as being at elevated risk, obtain information about their motivation to change and the severity of alcohol-related problems.

It is important to assess motivation in order to initiate appropriate therapy. The stages of motivation describe mental processes people must work through before they are able to make meaningful changes in their lifestyles and maintain their momentum. Two questions are helpful in assessing a patient's readiness for change: What do you think about your drinking? and With my help, would you be interested in further assessment?

One model for behaviour change identifies six stages through which patients must move as they are modifying their behaviour:

- precontemplation (has not thought of a problem or of a change),
- contemplation (is considering change),
- preparation (is planning change in the near future),
- action (has initiated change),
- maintenance (is maintaining an ultimate goal), and
- relapse (has attempted change but has not been able to maintain it). [20]

Lifestyle change suggestions at the precontemplative stage would very likely meet with resistance and ambivalence. Success is more likely if patients are provided with brief promotional information, such as low-risk limits; if they are given feedback on their level of risk; or if their health concern can be linked to at-risk drinking. Ultimately, patients are responsible for initiating and maintaining change. Physicians can facilitate change with clear messages of concern and offers to continue queries in follow-up appointments. Patients who are thinking about or preparing for change should be assessed for the severity of their risk.

Table 2. **The CAGE questionnaire**

C	Have you ever felt the need to cut down on your drinking?
A	Has anyone ever *angered* you by criticizing your drinking?
G	Have you ever felt *guilty* over consequences of drinking?
E	Have you ever had an *eyeopener* (morning drink)?

Reprinted with permission from D'Archangelo.[18]

Determining the severity of alcohol-related problems is important for defining appropriate treatment goals. Non-dependent drinkers who are drinking at hazardous levels or who have experienced at least one problem related to alcohol are likely to reject a goal of abstinence and can be taught skills to reduce their consumption to low-risk levels. Drinkers who meet the criteria for dependence often do not respond to brief intervention and should be referred to specialized treatment services.

Alcohol dependence, as defined by ICD-10 and DSM-III-R criteria, is present when three or more of the following are present: compulsion to drink, difficulty controlling the level of use or reducing use, using alcohol to relieve or avoid withdrawal symptoms, withdrawal symptoms, tolerance to effects, reduced activities unrelated to alcohol, more time with alcohol, some loss of role obligations, and continued use of alcohol despite consequences (only DSM-III-R). The pattern of use has been established for more than 1 month (DSM-III-R) or within the past year (ICD-10).[21]

One can assess severity by using the following tools. The 10-item AUDIT questionnaire is quick and is useful across cultures to identify harmful drinkers or dependency with accuracy.[22] Physical examination and biochemical markers can be used to document severe, chronic problems.[23] Alternatively, to approximate a "best match," one

Table 3. **Patient characteristics affecting risk of treatment failure**

Factors that reduce risk of failure: brief intervention appropriate
Socially stable
Absence of severe psychosocial problems
Absence of symptoms of severe dependence
High motivation for change
Unwilling to attend specialized treatment
Factors that indicate substantial risk of severe problems or dependence: specialized treatment appropriate
Lack of social support
Severe psychosocial problems
Excessive use of other drugs (other than nicotine)
Symptoms of severe dependence
• Compulsion to drink or obsession with drinking
• Impaired control
• "Relief" drinking (to avoid withdrawal)
• Withdrawal symptoms
• Increased tolerance

can look for patient characteristics that have been associated with success in treatment (*Table 3*).[3]

Even after the patient agrees to a treatment goal, regular follow-up care will allow one to monitor the appropriateness of the intervention strategy and change goals if necessary.

Advise. Physicians can now give feedback as to the severity of the patient's drinking problem and advise brief intervention or specialized treatment. Brief intervention can be used with elevated-risk patients and substantial-risk patients unwilling to attend specialized treatment. If patients do not attain a specific goal before the follow-up appointment, the need for referral services is established. During the first visit a specific short-term or possibly long-term goal should be negotiated. The goal can be either to stop drinking or to switch to low-risk drinking. Both of these goals can be achieved in several ways.

- Cut down gradually until reaching a final goal.
- Drink within the limits of low-risk drinking right away.
- Stop drinking for 2 to 3 weeks. Then on follow up, one can decide to continue with no alcohol or to drink at a low-risk level.

Those drinking more than 40 drinks weekly should be advised to cut down slowly and obtain social support. Specialized intervention is best for substantial-risk patients who have severe alcohol-related problems or dependency, other drug use, comorbid mental illness, or a life crisis.

Assist. Some patients have the personal resources and such a mild problem that they can stop drinking or cut down to a low-risk level with simple advice and follow up. Smoking cessation trials[24] have shown that providing self-help materials increases the proportion of patients who stop smoking. Using text provided by Dr Martha Sanchez-Craig, the ARAI Steering Committee has developed a workbook to assist patients quitting or cutting down on their drinking. Specific advice to patients to work through the exercises can provide them with motivation to change and a personal strategy to anticipate and prevent slips. On follow up, physicians can clarify and reinforce motivation and coping skills. They should also suggest that follow up is important to deal with relapse. Failure to achieve goals could be reason to discuss referral to specialized services.

Discussion

Studies supporting the effectiveness of brief cognitive-behavioural intervention have been published for about 20 years. A variety of brief intervention techniques are described in the literature.[25-27] Core components consist of assessing alcohol intake, providing information on harmful and hazardous drinking, and offering clear advice focused on drinking behaviour for the individual. Booklets for patients are often used with the intervention. Factors that improve the outcome of brief intervention programs used in Ontario for problem (largely non-dependent) drinkers include allowing individuals to choose their goals[28] and

providing materials with specific steps to reach abstinence or controlled drinking, rather than general information on alcohol's effects.[29]

Multiple trials comparing brief treatments with specialist treatments (inpatient or outpatient) have failed to show extra benefit of the more extended and comprehensive programs.[30] However, matching treatments to severity and number of problems is expected to improve effectiveness. Where brief interventions are unsuccessful, more comprehensive interventions could prove effective. One study found that having many problems was predictive of poor outcome from brief treatment, whereas severity of drug involvement was not.[31] These results suggest that patients who have problems directly relating to their alcohol misuse alone and irrespective of severity would be candidates for brief treatment. Those with other serious problems could need a broader-spectrum approach.

Use of brief intervention in primary care has been limited, although large, controlled trials demonstrate its effectiveness in reducing alcohol consumption.[15] A meta-analysis of two large studies and four smaller, comparable studies showed consistently positive effects, and an overall effect of a 24% reduction in consumption (95% confidence interval 18% to 31%).[14] Because assessment of patient controls is unavoidable and yet is an important component of brief treatments, the overall effectiveness of focused treatment has probably been underestimated.

Requesting copies of the ARAI package

Physicians receive copies of the ARAI package when they attend ARAI workshops, both locally and at national Annual Scientific Assemblies. The College of Family Physicians of Canada publishes, disseminates, and updates these materials. For information on training events in your area, write to The College of Family Physicians of Canada, 2630 Skymark Ave, Mississauga, ON L4W 5A4, or contact your provincial Chapter office.

The ARAI package includes a physician resource manual, a patient workbook, a flow chart, and a primary prevention leaflet. The manual is packed with practical history and philosophical background, assessment tools, emergency patient aids, and discussions on special populations and topics. Training provides an essential attitude exercise and supervised support for practising new skills.

What comes next?

The ARAI project has now developed materials to support family physicians in postgraduate training and in practice to screen for and prevent alcohol problems in their patients. The materials include a health promotion pamphlet, a reference manual, a patient workbook, and a monitoring flow sheet for charting.[3] Responses to pilot tests of the materials have been positive, in that practising family physicians report that the ARAI process was useful and that they learned new skills during the training. The project will be disseminated through the provincial chapters of the College of Family Physicians of Canada and the residency programs. The first "Train the Trainers" workshop was held in March 1994. The ARAI Steering Committee is now evaluating the process. The ARAI Steering Committee initially decided that the materials would be made available only to those who attend the training events.

Educating all family physicians in Canada on focused intervention is not the only important task pending. Physicians need to become aware of their attitudes about patients with alcohol problems to allow themselves to work objectively. Most physicians hold strong views on alcohol, which are based on their personal values and experiences, early modeling of poorly informed mentors, and a poorly informed Canadian society. They lack support from society, manifested by inconsistent insurance schemes, punitive personnel policies, weak medical society policies, and poorly defined legal and confidentiality guidelines. Ambivalence can be sorted out by open discussions and negotiated policies, as exemplified by the recent Canadian Medical Association statement on alcohol, which clarified physicians'

roles.[11] Clearly, if family physicians are provided with brief training and resources, with experience and social support, they can become effective in preventing and reducing harm from alcohol. ■

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